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MONTHLY NOTICES

OF THE

ROYAL ASTRONOMICAL SOCIETY.

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William Lassell, Esq., President, in the Chair.

Edward Dent, Esq., 12 Hyde Park Gardens;
James Dyson Perrins, Esq., Davenham Bank, Malvern; and
Charles Henry Gatty, Esq., Felbridge Park, East Grinsted,
were balloted for and duly elected Fellows of the Society.

Meteorological Observations taken at Gibraltar.
By Lieut. Alexander B. Brown, R. A.

Since some discussion has been entered into with respect to a suitable station for observing the total phase of the Solar Eclipse of December 22nd, 1870; and as it is absolutely necessary for the satisfactory carrying out of our experiments that we should have a clear or moderately clear sky, I have much pleasure in submitting to the Society some extracts from my meteorological notes taken in Gibraltar from 1860 to 1867. From that date (1867) to the present time I have fallen back (for the last two years) to well authenticated observations.

I should remark that at Gibraltar,—

b means blue sky, quite or almost quite free from cloud;
c means much or little blue sky with cloud;
f, fog; *m*, mist; *g*, gloomy; *r*, rain; *p*, passing showers.

As respects force of wind,—

1, light air;	2, light breeze;
3, gentle breeze;	4, moderate breeze;
5, fresh breeze;	12, hurricane.

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Notes on 22nd December.

	Wind.	Force.	Barometer.	Sky.
1860, Dec. 22	SW, W	6	29·93	Fog
1861, ,,	SW, SSW	5	29·78	Showery
1862, ,,	WNW	3	30·01	Blue sky
1863, ,,	NE, WNW	2	30·23	Blue sky
1864, ,,	ENE, NE	2	30·00	Blue sky, with cloud
1865, ,,	SE, ESE	4	30·25	Cloudy
1866, ,,	E	3	30·24	Blue sky, with cloud
1867, ,,	W	4	30·16	Blue sky
1868, ,,	WSW, SW	5	30·13	Blue sky
1869, ,,	WNW	5	30·07	Blue sky, with cloud

Meteorological Notes of 17 Days, from 15 to 31 December (inclusive) for past 10 years.

17 Days. 15–31 December.	Average Wind.	Force of Wind.	*b.*	*c.*	*f, m.*	*g.*	*r.*	*p.*
1860	WNW, SW	5	6	6	4	1	..	..
1861	NE, SE	4	3	5	1	1	6	1
1862	WNW, ENE	3	10	6	1	..	..	..
1863	WNW	3	13	3	..	..	1	..
1864	WNW	4	5	10	1	..	..	1
1865	E, ENE, ESE	2	12	4½	..	..	½	..
1866	E, ESE	4	6	9	2	..	..	..
1867	W, WNW	3	8	5	1	..	½	2½
1868	WNW	5	11	5	..	..	1	..
1869	WNW	5	7	9	½	..	..	½

The numbers in the last six columns show for each year how many of the 17 days were *b*, *c* ; *f*, *m* ; *g*, *r*, or *p*, respectively; the total in each line being of course = 17. The observations being taken at 9 A.M. and 3 P.M., ½ days have been introduced.

We thus see then, out of the last 10 returns of 22nd December, there were

4 very good observing days;
3 fair ditto;
1 not quite so good;
1 in which probably little could be done; and
1 useless for observation of the Sun.

That from the 15th to 31st December in the

Years	1860	6 very good days	6 fair days	5 indifferent
	1861	3 ,,	5 ,,	9 ,,
	1862	10 ,,	6 ,,	1 ,,
	1863	13 ,,	3 ,,	1 ,,

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Years						
1864	5	very good days	10	fair days	2	indifferent
1865	12	"	4½	"	½	"
1866	6	"	9	"	2	"
1867	8	"	5	"	3	"
1868	11	"	5	"	1	"
1869	7	"	9	"	1	"

which I think we may consider very satisfactory.

On his Photographs taken during the Total Solar Eclipse, Aug. 7, 1869. By Commander Ashe.

(*Letter addressed to the Editor of the Monthly Notices.*)

In the *Monthly Notices* of the Astronomical Society of Feb. 11, 1870, in the Council Report, at page 108 (in reference to the four negatives taken during totality at Jefferson Town) are these words,—"Unfortunately, in photographs 3 and 4, there is evidence of the disturbance of the telescope during the exposure of the sensitive plate."

Now I beg to state there is no evidence of the sort, and by the enclosed print of an enlarged copy of No. iv. I clearly prove that no disturbance of the telescope took place. I have given ample evidence to the Astronomer Royal that the telescope was not disturbed; but if there was nothing else, the photograms taken at Des Moines (the next station to us), would prove it, for, in the photogram taken near the end of totality, are seen the stumps of the three parallel planes of light that are seen in No. iv. photogram at E. My negative was taken as near the limb of the Sun as it is possible to take it, for just as I closed the slide the Sun burst out, and this remarkable photogram shows two bright bands divided by a dark band. What are they? They are crossed by rays of light that do not radiate from the Sun's centre, but are all parallel to each other. It must be remembered that no other party was looking at the totality at the same time that we were, for just as it ended at Jefferson it commenced at Des Moines.

Now, with reference to my photograms "confirming what has already been stated in regard to the identity of form preserved by the protuberances," I will now relate a fact that was seen by all at Jefferson, and by Mr. Falconer, whose address is Alexander Plytts Falconer, Esq., Bath County Club, Bath, and may be referred to. The point of light that is seen in No. i., and is described by all the American astronomers, on the "great protuberance"—whilst I was waiting for No. iii. plate—shot out to an enormous length, at least one-third longer than it is seen in No. iii. photogram; and when it reached its greatest height (which